

CLAIMS

WHAT IS CLAIMED IS:

1. Apparatus for protecting a composite-body aircraft against damage from lightning strikes, the apparatus comprising a Faraday cage defined on an exterior surface of the aircraft  
5 body.

2. The apparatus of claim 1, wherein the Faraday cage comprises a continuous, electrically conductive grid disposed on the exterior surface of the aircraft body and extending to its outermost lateral periphery.

3. The apparatus of claim 2, wherein:  
10 the body of the aircraft comprises a plurality of composite panels joined at their respective edges by splice plates; and,  
the electrically conductive grid comprises electrically conductive splice plates having respective adjacent ends that are electrically coupled to each other.

4. The apparatus of claim 3, wherein the respective adjacent ends of the electrically conductive splice plates are electrically coupled to each other by electrically conductive fasteners  
15 extending through respective ones of the adjacent ends of the plates and an electrically conductive strap extending between the respective adjacent ends thereof.

5. The apparatus of claim 3, wherein the electrically conductive splice plates comprise titanium.

20 6. The apparatus of claim 1, wherein the aircraft comprises a blended-wing-body (“BWB”) aircraft.

7. The apparatus of claim 3, wherein the composite panels comprise graphite fibers.

8. The apparatus of claim 2, wherein the aircraft includes an electrical system, and wherein the electrically conductive grid comprises a ground return path of the electrical system.

9. A method for protecting a composite-body aircraft against damage from lightning strikes, the method comprising defining a Faraday cage on an exterior surface of the aircraft.

10. The method of claim 9, wherein defining the Faraday cage comprises forming a continuous, electrically conductive grid on the exterior surface of the aircraft body that extends to its  
5 outermost lateral periphery.

11. The method of claim 10, wherein the body of the aircraft comprises a plurality of composite panels joined by splice plates at adjacent edges thereof, and wherein forming the electrically conductive grid comprises:

10 providing electrically conductive splice plates at the adjacent edges of the panels; and,  
electrically coupling respective adjacent ends of the conductive splice plates to each other.

12. The method of claim 11, wherein electrically connecting the respective adjacent ends of the electrically conductive splice plates to each other comprises:

15 providing an electrically conductive bonding strap that extends between the adjacent ends  
of the plates; and,  
extending electrically conductive fasteners through respective ones of the adjacent ends of the plates and the bonding strap.

13. The method of claim 11, wherein the electrically conductive splice plates comprise titanium.

20 14. The method of claim 9, wherein the aircraft comprises a blended-wing-body (“BWB”) aircraft.

15. The method of claim 11, wherein the composite panels comprise graphite fibers.

16. The method of claim 10, wherein the aircraft includes an electrical system, and wherein the electrically conductive grid comprises a ground return path of the electrical system.